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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HUYNH, SON P

ART UNIT

PAPER NUMBER

2623

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/880,103

Applicant(s)

BEN-BASSAT ET AL.

Examiner

Son P. Huynh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11, 13-16, 18, 24-26, 31 and 34-41 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 and 34-41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-16, 18, 24-26 and 31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of claims 13-16, 18, 24-26 and 31 in the reply filed on July 31, 2006 is acknowledged.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 13-16, 18, 24-26, 31 have been considered but are moot in view of the new ground(s) of rejection.

Claims 12, 17, 19-23, 27-30, 32-33 have been canceled.

Claims 1-11 and 34-41 have been withdrawn.

### ***Claim Objections***

3. Claims 16 and 25 are objected to because of the following informalities:  
Claim 16, lines 2-3, recites limitation "the cards" should be replaced as – the transmitter portion and the receiver portion--  
Claim 25, line 2, recites limitation "the transmitter card" should be replaced as – the transmitter portion--. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 15-16 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 15, lines 6-12, recites the limitation "... a receiver portion.... and including a programmable frequency synthesizer and programmable modulator for allowing a transmission/reception frequency and modulation to be selectively modified by the personal computer" is not supported by the Specification. Instead, the Specification discloses the transmitter card/portion (25,60, 107) comprises synthesizer (14) and modulator 40 (figures 2-3,5) and receiver card/portion comprises demodulator (53), decoder (59) (see figures 3, 5, page 15, paragraph 2, page 16, paragraph 3). The Specification does not show "a receiver portion including a programmable frequency

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synthesizer and programmable modulator for allowing a transmission/reception... as claimed in claim 15.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 13-14, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carhart (6,622,304) in view of Fleming (US 6,073,188), and further in view of Bukhari (US 6,763,222).

Regarding claim 13, Carhart discloses a transceiver card (external interface card 26 – col. 10, line 66-col. 11, line 8; col. 12, lines 13-18) for a personal computer (computing apparatus 21), the personal computer having a USB type port (USB extension is used for communication path between the external interface device 26 and the computing apparatus 21 – col. 11, lines 1-8), the transceiver comprising:

a transceiver that resides in a box external to the computer and that transmits radio frequency signals responsive to data received from the personal computer via the

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USB type port and that receives radio frequency signals and converts the received signals to data for transfer to the personal computer via the USB type port (card 26 comprises component 50 or transmitter, which correspond to components 72, 701, 702 in figure 7, that resides in external peripheral card 26, for transmitting upstream signal to external network responsive to data received from computing apparatus 21 via the USB type port connected between computing apparatus 21 and external peripheral card 26 – figures 5-8; col. 9, lines 59-67; col. 11, lines 1-9; col. 12, line 14-56 and component 58 or 52, which correspond to components 75-79, 703, 704 in figure 7, that receives radio frequency signal ( $f_1$ ,  $f_2$ ) and converts the signals to data for transfer to the computing apparatus 21 via USB type port connect to external card 26 – figures 5-8; col. 12, line 57-col. 13, line 44; col. 11, lines 1-9).

Carhart disclose the transceiver in PC interface card has interfaces for connection to different devices such as computer 21, splitter reference 25 via cable 23, etc. (figure 2). However, Carhart does not specifically disclose transceiver (receiver and transmitter components 50, 52, 58 in card 26) includes a network hub.

Fleming discloses using network hub (122) which couples USB port to USB interfaces (124) via a USB bus (126) (figure 1a, col. 4, lines 19-42). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Carhart to use the teaching as taught by Fleming in order to improve convenience for connecting different devices (col. 2, lines 32-51).

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Carhart also discloses the external system is for satellite TV instead of CATV (col. 5, lines 15-20; col. 17, lines 22-23). However, Carhart does not specifically disclose a satellite antenna interface for coupling an external power supply to an external satellite antenna amplifier via a connection which transmits radio frequency signals.

Bukhari discloses transceiver including a satellite antenna interface for coupling an external power supply to an external satellite antennal amplifier via a connection which transmits radio frequency signals (interpreted as IDU 24 including an interface to cable 26 for coupling DC power supply (external to amplifier 36) to amplifier 36 in the ODU 22 via cable 26 which transmits upstream and downstream signal to and from the satellite to the user – see figures 1-2, col. 3, line 8-col. 4, line 42). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Carhart to use the teaching as taught by Bukhari in order to reduce the cost of power supplied to the transceiver thereby reduce the cost of the transceiver.

Regarding claim 14, Carhart further discloses an auxiliary bus directly connecting the transmitter card portion and the receiver cart portion of the transceiver (auxiliary bus connecting directly the RAMDAC 72, processing 701, modulation 702 to devices 75-79, 706 – figure 7).

Regarding claim 25, Carhart discloses two way communications between an in home communications station and the distribution system (col. 8, lines 10-12). Carhart further

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discloses the distribution system is for satellite TV (col. 5, lines 16-19). Thus, the signals are transmitted to a satellite. Alternatively, Bukhari also disclose the signals are transmitted to a satellite (figure 1).

8. Claims 15-16, 18, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carhart (6,622,304), in view of Dinwiddie et al. (US 6,481,013), and further in view of Seta (US 5,301,194).

Regarding claim 15, Carhart discloses a transceiver card (external interface card 26 – col. 10, line 66-col. 11, line 8; col. 12, lines 13-18) for a personal computer (computing apparatus 21), the personal computer having a USB port (USB extension is used for communication path between the external interface device 26 and the computing apparatus 21 – col. 11, lines 1-8), the transceiver comprising:

a transmitter portion that resides in a box external to the computer and that transmits radio frequency signals responsive to data received from the personal computer via the USB type port (component 50 or transmitter, which correspond to components 72, 701,702 in figure 7, that resides in external peripheral card 26, for transmitting upstream signal to external network responsive to data received from computing apparatus 21 via the USB port connected between computing apparatus 21 and external peripheral card 26 – figures 5-8; col. 9, lines 59-67; col. 11, lines 1-9; col. 12, line 14-56);



a receiver portion that resides in the external box and that receives radio frequency signals and converts the received signals to data for transfer to the personal computer via the USB type port (component 58 or 52, which correspond to components 75-79, 703,704 in figure 7, that resides in external peripheral card (26) and that receives radio frequency signal (f1, f2) and converts the signals to data for transfer to the computing apparatus 21 via USB port connect to external card 26 – figures 5-8; col. 12, line 57-col. 13, line 44; col. 11, lines 1-9). Carhart further discloses an auxiliary bus directly connecting the transmitter (72,701,702) and the receiver (75-79,706- figure 7). Carhart also discloses the external system is for satellite TV instead of CATV (col. 5, lines 15-20; col. 17, lines 22-23). However, Carhart does not specifically disclose a receiver portion includes a programmable frequency synthesizer and programmable modulator for allowing a transmission/reception frequency and modulation to be selectively modified by the personal computer, and synchronizing signal is conveyed from the receiver and the transmitter via the auxiliary bus.

Dinwiddie et al. discloses a receiver portion (receives 104 or 108 receives signals from audio video sources 45 or 49-figures 5A, 5B,10A, 10B) includes a programmable frequency synthesizer and programmable modulator for allowing a transmission/reception frequency and modulation to be selectively modified by the personal computer (col. 9, lines 15-40, col. 16, lines 50-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Carhart to use the teaching as taught by Dinwiddie in order to convert the

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signals to a format that suitable for providing to display device. However, neither Carhart nor Dinwiddie specifically discloses synchronizing signal is conveyed from the receiver and the transmitter via the auxiliary bus.

Seta discloses synchronizing signal is conveyed from the receiver (25,26) and the transmitter (22-23) via the auxiliary bus (receiver receives synchronizing signal, slot signal, etc. from the central office, processes and transmits the synchronizing signal, slot signal to the transmitter to control the transmitter to transmit the signal according to the synchronizing signal, slot number –figures 2-4; col. 6, line 57-col. 8, line 37; col. 9, lines 30-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Carhart in view of Dinwiddie to use the teaching as taught by Seta in order to reduce packet collision thereby improve transmission efficiency (col. 2, lines 55-64).

Regarding claim 16, Carhart in view of Dinwiddie and Seta teaches a transceiver as discussed in the rejection of claim 15. Seta also discloses an auxiliary bus connects the transmitter portion and the receiver portion as discussed in the rejection of claim 15 above, the transmitter portion and the receiver portion inherently has respective connectors so that the auxiliary bus connect the transmitter portion and the receiver portion to each other.

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Regarding claim 18, Carhart further discloses the processor 701 then processes the video signal, which subsequently gets modulated to a frequency band  $f_2$  by a modulator 702. The processor 701 may include precompensation of the video signal to account for an uneven passband (col. 12, lines 44-56, figure 7). It is obvious that the transmitter includes a frequency synthesizer for generating the radio frequency signal (i.e. in frequency band  $f_2$ ) to improve efficiency in data transmission.

Regarding claim 24, Carhart further discloses the transmitter includes radio frequency modulation circuitry (i.e. modulation 702 – figure 7) and the modulation circuitry modulates the transmitted signals according to a predetermined protocol (i.e. NTSC, PAL, ATV, etc.) in accordance with a command conveyed to the card via the USB port (instructions conveyed from computing unit via USB) – col. 11, lines 1-32; col. 12, lines 24-56; col. 13, lines 32-44). However, Carhart does not specifically disclose the modulation circuitry includes an encoder that encodes error correction into the transmitted signals. Official Notice is taken that using encoder that encodes error correction into the transmitted signals is well known in the art. For example, encode error correction in the transmitted signal so the error correction signal can be used to correct the signal at the receiving side. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Carhart, Dinwiddie and Seta in order to improve efficiency in data transmission.

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9. Claims 26 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carhart (6,622,304), in view of Bukhari (US 6,763,222), and further in view of Fleming (US 6,073,188) and Seta (US 5,301,194).

Regarding claim 26, the limitations of the method as claimed correspond to the limitations of the transceiver as claimed in claim 13, and are analyzed as discussed in the rejection of claim 13. However, Carhart in view of Bukhari and Fleming does not specifically disclose the additional limitation of conveying a synchronizing signal from the receiver to the transmitter via the auxiliary bus.

Seta discloses synchronizing signal is conveyed from the receiver (25,26) and the transmitter (22-23) via the auxiliary bus (receiver receives synchronizing signal, slot signal, etc. from the central office, processes and transmits the synchronizing signal, slot signal to the transmitter to control the transmitter to transmit the signal according to the synchronizing signal, slot number –figures 2-4; col. 6, line 57-col. 8, line 37; col. 9, lines 30-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Carhart in view of Bukhari and Fleming to use the teaching as taught by Seta in order to reduce packet collision thereby improve transmission efficiency (col. 2, lines 55-64).

Regarding claim 31, the additional limitation as claimed correspond to the additional limitation of claim 24, and are analyzed as discussed with respect to the rejection of claim 24.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Meirzon et al. (US 6,934,512) discloses switching VSAT transmitter.

Hannah et al. (US 5,774,788) discloses remote ground terminal having an outdoor unit with a frequency multiplier.

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son P. Huynh whose telephone number is 571-272-7295. The examiner can normally be reached on 9:00 - 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S. Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Son P. Huynh

October 11, 2006



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